

CLAIMS

What is claimed is:

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1. A method comprising:
 - storing data in a first memory, the first memory being a non-volatile storage medium in a cache; and
 - pinning a portion of the data stored in the first memory.
2. The method of claim 1, wherein storing the data comprises storing the data in a mass storage cache.
3. The method of claim 1, wherein pinning of data comprises pinning the portion of data necessary for a system initialization.
4. The method of claim 1, wherein the pinning of data comprises:
 - storing metadata corresponding to the data stored in the first memory; and
 - setting a state in the metadata to indicate that a corresponding line of data is pinned.
5. The method of claim 4, wherein storing the metadata comprises storing the metadata in a second memory.
6. The method of claim 4, wherein storing the metadata comprises storing the metadata in a volatile storage media.
7. A metadata stored in a memory comprising:

2 a first state to indicate a least recently used information of a corresponding
3 line of data in a non-volatile memory; and

4 a second state to indicate whether a corresponding line of data in the non-
5 volatile memory is pinned.

1 8. The metadata of claim 7, further comprising:

2 a third state to indicate whether a corresponding line of data in the non-
3 volatile memory was present before a system initialization.

1 9. The metadata of claim 7, wherein the metadata is stored in a volatile
2 storage media.

1 10. A system comprising:

2 a cache including a first storage media to store cache data, the first storage
3 media being a non-volatile storage media; and

4 a second storage media to store metadata for the cache data stored in the
5 first storage media, the metadata including a state to indicate whether a
6 corresponding line of data is pinned.

1 11. The system of claim 10, wherein the cache is a mass storage cache.

1 12. The system of claim 10, wherein the second storage media is a
2 volatile storage media.

1 13. The system of claim 10, wherein the second storage media is
2 included in the cache.

1 14. The system of claim 10, wherein the cache is implemented as an add-
2 in card.

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1 15. A method comprising:
2 accessing a first memory during a system initialization, the first memory
3 being a cache; and
4 pinning data accessed during the system initialization in the first memory.

1 16. The method of claim 15, wherein the cache is a mass storage cache.

1 17. The method of claim 15, further comprising:
2 limiting the pinning of data during the system initialization.

1 18. The method of claim 15, wherein the pinning of data during the
2 system initialization comprises:
3 storing metadata for the data stored in the first memory, the metadata
4 including a first state to indicate whether a corresponding line of data is pinned; and
5 setting a first state corresponding to the accessed data to indicate that the
6 accessed data is pinned.

1 19. The method of claim 18, wherein the pinning of data further
2 comprises:
3 setting a timer upon the system initialization; and
4 setting a first state corresponding to the accessed data until the timer
5 expires.

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8 setting a first state corresponding to the accessed data if the maximum
9 amount is not exceeded and if the timer has not expired; and otherwise

1 22. The method of claim 21, wherein the metadata further includes a third
2 state to indicate the age of a corresponding line of data and the clearing of a first
3 state comprises:

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6 a memory control hub to cause a first state to be set for data accessed
7 during the system initialization, the setting of the first state to indicate that a
8 corresponding line of data is pinned.

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1 27. The system of claim 23, wherein the second storage media is a
2 volatile storage media.

1 28. The system of claim 23, wherein the second storage media is
2 included in the cache.

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2 29. The system of claim 23, wherein the cache is implemented as an add-
in card.

1 30. A program loaded into a computer readable media comprising:
2 a first group of computer instructions to access data in a non-volatile cache;
3 a second group of computer instructions to pin data accessed in the non-
4 volatile cache.

1 31. The program of claim 30, wherein the second group of computer
2 instructions includes computer instructions to pin data accessed during a system
3 initialization.

1 32. The program of claim 31, wherein the second group of computer
2 instructions further includes computer instructions to limit the amount of data
3 pinned.

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